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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/548,637	04/13/2000	John R Koza	50291.P009	6771

7590 04/20/2009
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EXAMINER

WONG, LUT

ART UNIT	PAPER NUMBER
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2129

MAIL DATE	DELIVERY MODE
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04/20/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/548,637	Applicant(s) KOZA ET AL.	
	Examiner LUT WONG	Art Unit 2129	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 March 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 13-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 13-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This office action is responsive to an AMENDMENT entered 3-11-2009 for the patent application 09/548637.

The office action of 12-11-2008 is fully incorporated into this office action by reference.

Status of Claims

Claims 1-6, 13-23 are pending. Claims 1, 22-23 have been amended.
Claims 12 has been canceled.

Record keeping

Drawing objection is maintained.

Response to Arguments

Applicant's amendment has overcome previous spec and claim objection, 112 rejection.

Claim Rejections - 35 USC § 101

Claim 23 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as set forth in the previous office action for reason of record.

Response to Arguments

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Applicant's arguments have been fully considered but they are not persuasive.

In re pg. 9, applicant submits that changing the claim to "computer - readable storage medium" overcomes the rejection.

In response, the rejection is maintained.

Page 33 of the spec, amended on 11/14/2008, is reproduced below:

A **computer-readable storage medium** includes any mechanism for storing or transmitting information in a form readable by a machine (e.g., a computer). For example, a machine-readable medium includes read only memory ("ROM"); random access memory ("RAM"); magnetic disk storage media; optical storage media; flash memory devices; electrical, optical, acoustical or other form **of propagated signals (e.g., carrier waves, infrared signals, digital signals, etc.); etc.** –

It is readily clear that "computer -readable storage medium" still encompass non statutory mediums.

Claim Rejections - 35 USC § 103

Claims 1-6, 12-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicants' admitted prior arts (APA) by **Koza** et al, (US 5867397) and in view of another APA (**Ullman**, J.R) as set forth in the previous office action.

Response to Arguments

Applicant's arguments have been fully considered but they are not persuasive.

In re pgs. 9-10, applicant argues

Rejection under 35 USC §103(a) – claims 1-6 and 12-23

Claims 1-6, 13-23 stand rejected under 35 USC §103(a) as being allegedly unpatentable over applicants' admitted prior arts (APA) by Koza et al. (US 5,867,397) in view of another APA (Ullman, J.R) as set forth in the previous office action.

Applicant respectfully submits that the proposed combination of Koza '397 and Ullman does not teach or suggest all of the claim limitations of claims 1-6, 13-23. In particular, neither Koza '397 nor Ullman disclose "performing iterative genetic programming operations that avoid at least one characteristic in the reference structure" as recited in the claims.

As stated in the background section of the present application, "previous uses of these techniques have not addressed the issue of actively avoiding the creation of an entity that possesses the key characteristics of preexisting technology. In other words, previous efforts have not focused on an automated design process that produces designs that avoid known prior art." Page 13, lines 16-20. Furthermore, the prior art does "not address the problem of automatically creating novel structures that meet design requirements and that do not possess key characteristics of preexisting technology." Page 17, lines 2-3. Similarly, "the previously cited efforts for the automatic synthesis of antennas did not address the problem of automatically creating antennas that satisfy the

basic technical design requirements of the antenna and that simultaneously avoid the key characteristics of the preexisting antenna technology." Page 20, lines 16-19.

Thus, Applicant respectfully submits that claims 1-6, 13-23 recite novel subject matter which distinguishes over any possible combination of Koza '397 and Ullman.

In response, the Examiner agrees in part and disagrees in part.

1) This is exactly why 103 rejections were made. Should the APA by Koza alone is sufficient to teach the claimed invention, it would be a 102 rejection instead.

2) The amended limitation of "that avoid at least one characteristic in the reference structure" does not change the claim scope. Such limitation is already

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included in the preamble and being taken into accounts when formulating previous rejection. Furthermore, such limitation is not an active step, it is merely an intended result.

3) As set forth in the previous office action, 12/10/2007 pgs. 10-11, Koza et al teaches creating design that satisfy technical requirement by using genetic programming (See e.g. spec pg. 2, 9, 11-13, 37). Koze et al teaches determining fitness of entities, selecting entities, and creating new entities (See e.g. spec pg. 9). Koza et al does not teach creating *novel design* that satisfying both technical requirement and having characteristic not in prior art. However, one of ordinary skill in the art would know that the only difference in “creating a design” to “creating a *novel design*” is adding one more constraint to the multiobjective function. Such constraint is, of course, requiring the designed entity having characteristic not in prior art (*EN: this is exactly what's being amended and why it is an intended result*). Hence, one of ordinary skill in the art whom is aware of “novelty design” would immediately motivated to added another variable in the objective function or fitness measure to obtain a predictable result of “creating novel design”. Isomorphism value, as admitted by the applicant, is one of the many well known method that can be used to represent dissimilarity between candidate entity and the prior art (See e.g. spec pg. 95). Hence, one of ordinary skill in the art could have applied the isomorphism value together with the technical requirement as a measure of fitness to achieve the predictable result of “creating novel design”. It is merely applying known technique to known method. See *KSR International Co. v. Teleflex Inc.*, 550 U.S.--, 82 USPQ2d 1385 (2007).

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4) The Examiner has already set forth why one skill in the art would/could have combined both references with predictable result. See above and previous office action. Should the applicant disagree, the applicant can explain why one skill in the art could not and would not be able to combine or modify the prior arts to achieve predictable results. Merely attacking the references alone will not change the Examiner's position.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LUT WONG whose telephone number is (571)270-1123. The examiner can normally be reached on M-F 7:30-5.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vincent David can be reached on (571) 272-3080. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Lut Wong/

Examiner, Art Unit 2129

/David R Vincent/

Supervisory Patent Examiner, Art Unit 2129